

## **ON THE NEW NEOTROPICAL SPIDER GENUS *IANDUBA* (ARANEAE, CORINNIDAE)**

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### **ABSTRACT**

*Ianduba* new genus is proposed for five neotropical species and is considered as *incertae sedis* in Corinnidae. Four new species, *I. caxixe*, *I. patua*, *I. paubrasil* and the type species, *I. vatapa*, all from Bahia State, Brazil, are described. *Castianeira varia* Keyserling is transferred to the new genus.

**KEYWORDS.** *Ianduba*, Corinnidae, Araneae, Neotropical, Taxonomy.

### **INTRODUCTION**

The status of the spider family Corinnidae has been accepted without an objective diagnosis. In practice, taxonomists recognize a given spider as corinnid by its resemblance with one of the genera *Corinna* C. L. Koch, *Castianeira* Keyserling or *Trachelas* L. Koch. The spiders here assigned to the new genus *Ianduba* do not seem to be close relative of any of these genera, despite the fact that the only previously known species was described in the genus *Castianeira* by KEYSERLING (1891), under the name *C. varia*. The male of this species, discovered by MELLO-LEITÃO (1923), was studied in detail by CAMARGO (1950), but the original placement had been maintained to date. It is understandable as this species, as well as all other *Ianduba*, show some degree of ant mimicry, resembling the more generalized *Castianeira*. However, representatives of *Ianduba* do not present the simple pear-shaped palpal tegulum with folded tegular duct and apical embolus which are typical for Castianeirinae, but rather have a complex male palp bearing other tegular sclerites besides the embolus.

PENNIMAN (1985) suggested that the loss of median apophysis might be

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synapomorphic for Corinnidae, as it is present in other spiders with putatively homologous pre-coxal triangles. In fact, it is absent in neotropical corinnines, castianeirines and those genera related to *Trachelas*, but at least three African genera presently listed in Corinninae (*Mandaneta* Strand, *Procopius* Thorell and *Pseudocorinna* Simon) have a tegular sclerite which fits the classical definition of median apophysis, an articulated tegular process arising from a membranous area.

All species of *Ianduba* present a tegular sclerite recognizable as median apophysis but share with typical corinnines, castianeirines and trachelines the trichobothrial base which has an elongated ridge traversing a lowered plate (figs. 2, 5, 6; BONALDO & BRESCOVIT, 1994, fig. 4e; BONALDO, 1996, fig. 5). This feature occurs in *Procopius* and *Mandaneta* as well (figs. 3, 4) and seems to be synapomorphic for Corinnidae.

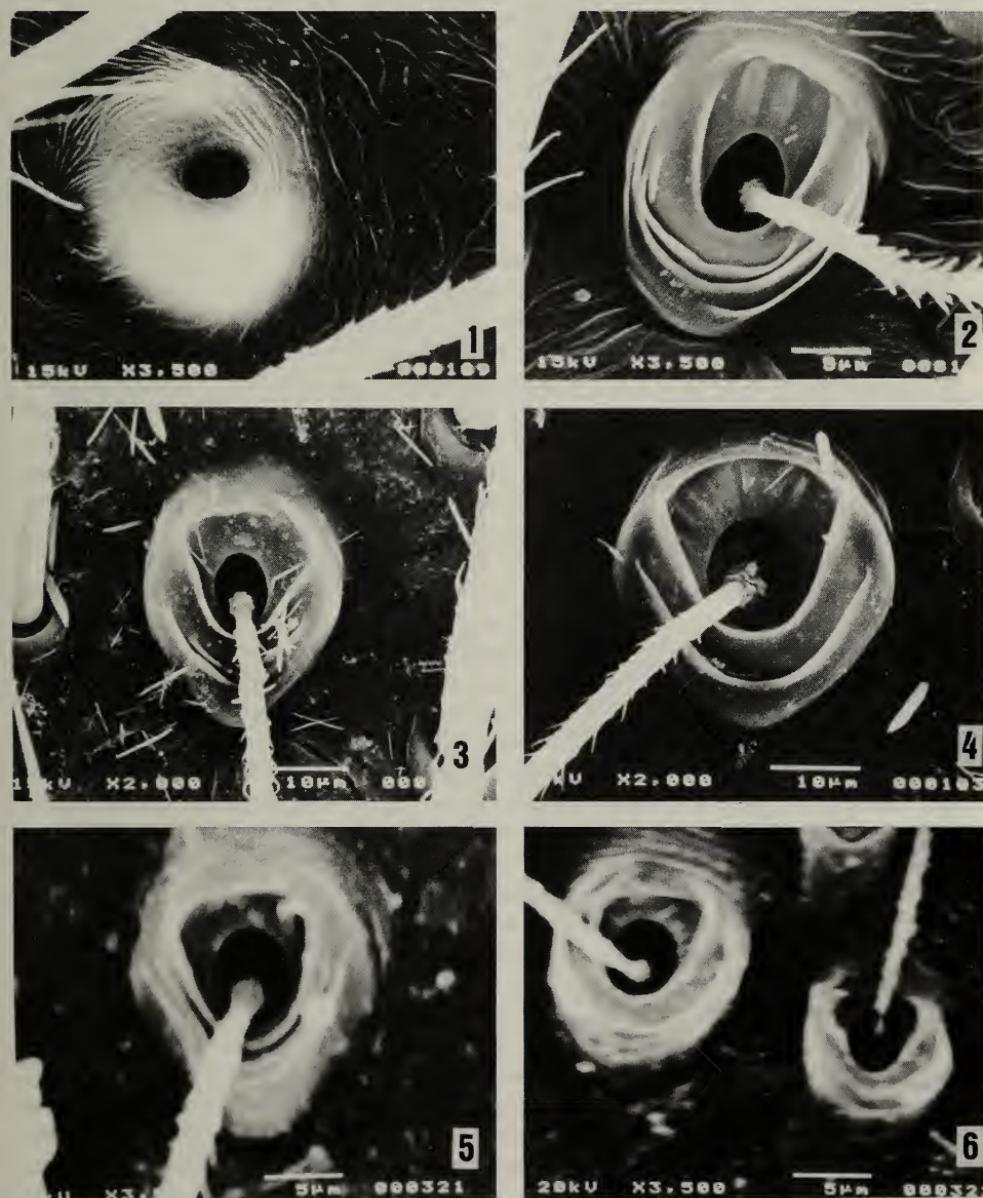
PLATNICK & BAPTISTA (1995) suggested that the coiled tegular duct in male palp might be synapomorphic for Corinninae. This character indicates that Corinninae is artificial as currently delimited, as the African genera formerly listed, as well as *Ianduba*, have an uncoiled tegular duct. The Corinninae *sensu stricto*, characterized by the coiled tegular duct and absence of median apophysis in male palpal bulb, is a mainly neotropical group. In a preliminary survey on African corinnids, only two typical corinnines were recorded: *Creugas gulosus* Thorell and *Xeropigo tridentiger* O. Pickard-Cambridge, both very common species in Central and South America.

In this paper, no attempt will be made in order to accommodate those widespread, poor known corinnids with uncoiled tegular duct and median apophysis, which may not represent a monophyletic group at all. The transitory solution is to consider *Ianduba* and the African genera formerly listed as *incertae sedis* in Corinnidae.

Despite the deviating male palp of *Ianduba varia*, all males included in the new genus share a short, prolaterally directed apical spur, surrounded by processes, on the ventral lobe of the retrolateral tibial apophysis and a membranous conductor arising behind the large and complex median apophysis. The females share a large median plate in the epigynum and a dorsal piece in the vulva. These features can be considered synapomorphies for the genus.

The material examined belongs to the following institutions: AMNH, American Museum of Natural History, New York (N. I. Platnick); IBSP, Instituto Butantan, São Paulo (A. D. Brescovit); Instituto Nacional de Pesquisas da Amazônia, Manaus (C. Magalhães); MCN, Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre (E.H. Buckup); MCP, Museu de Ciências, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (A. A. Lise); MCZ, Museum of Comparative Zoology, Cambridge, Mass. (H.W. Levi); MHCN, Museu de História Natural Capão da Imbuía, Curitiba (M. Braga); MLP, Museo de La Plata, La Plata (C. A. Sutton de Licitra); MRAC, Museum Royal de l'Afrique Centrale, Tervuren (R. Jocqué); MZSP, Museu de Zoologia, Universidade de São Paulo, São Paulo (J. L. Leme); MNRJ, Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro (A. B. Kury).

All measurements are in millimeters. The format of the descriptions follows those used in BONALDO & BRESCOVIT (1994). The typical spination pattern is



Figs. 1 - 6. *Ianduba varia* (Keyserling): 1, tarsal organ, tarsus I; 2 - 6, trichobothrial base, tarsus I: 2, *I. varia*; 3, *Procopius* sp.; 4, *Mandaneta sudana* (Karsch); 5, *Trachelas* sp.; 6, *Castianeira* sp.

given in the description of the genus; in the species descriptions figures only the divergent spination. The following specimens were used in the comparison of the trichobothrial base: *Castianeira* sp., ♂ from Marchantaria Island, Manaus, Brazil (INPA) (fig. 6); *Mandaneta sudana* (Karsch), ♂ from Marahoué Ranch, Mankono, Ivory Coast (MRAC 173984) (fig. 4); *Procopius* sp., ♂ from Marahoué Ranch, Mankono, Ivory Coast (MRAC 172250) (fig. 3); *Trachelas* sp., ♂ from Reserva Ducke, Manaus, Brazil (INPA) (fig. 5).

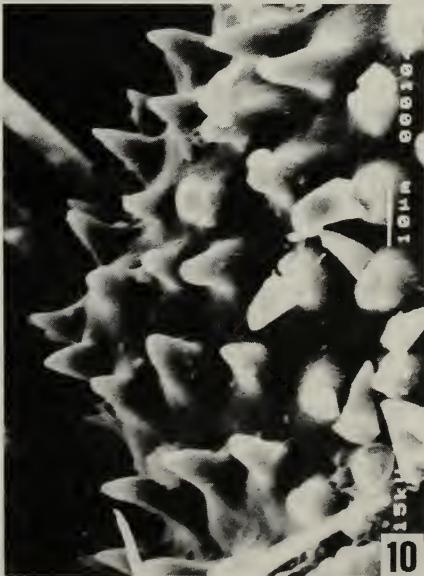
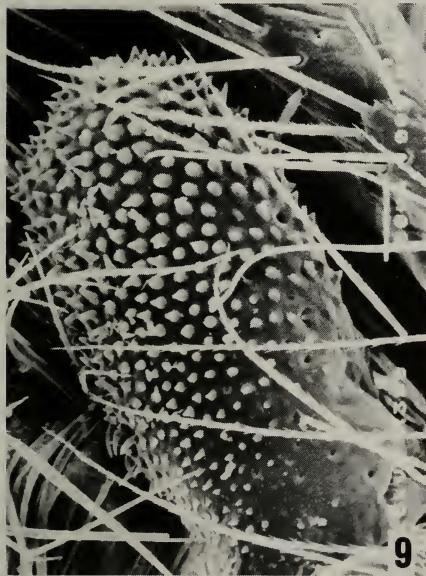
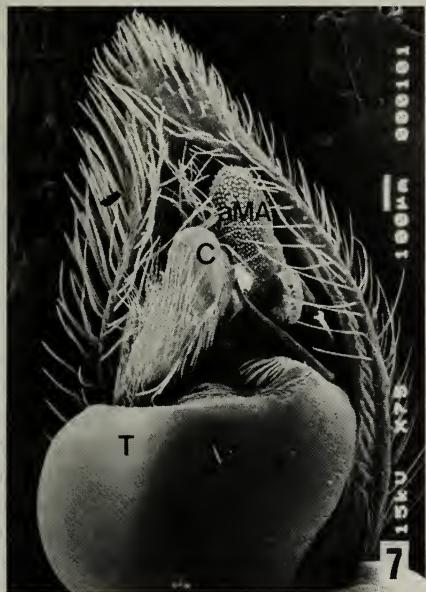
### *Ianduba*, new genus

Type species. *Ianduba vatapa* new species.

Etymology. The generic name is feminine in gender and is a combination of Iandú (spider in Tupí language) and the first two letters of Bahia, the Brazilian State from which the majority of the species of the genus were found.

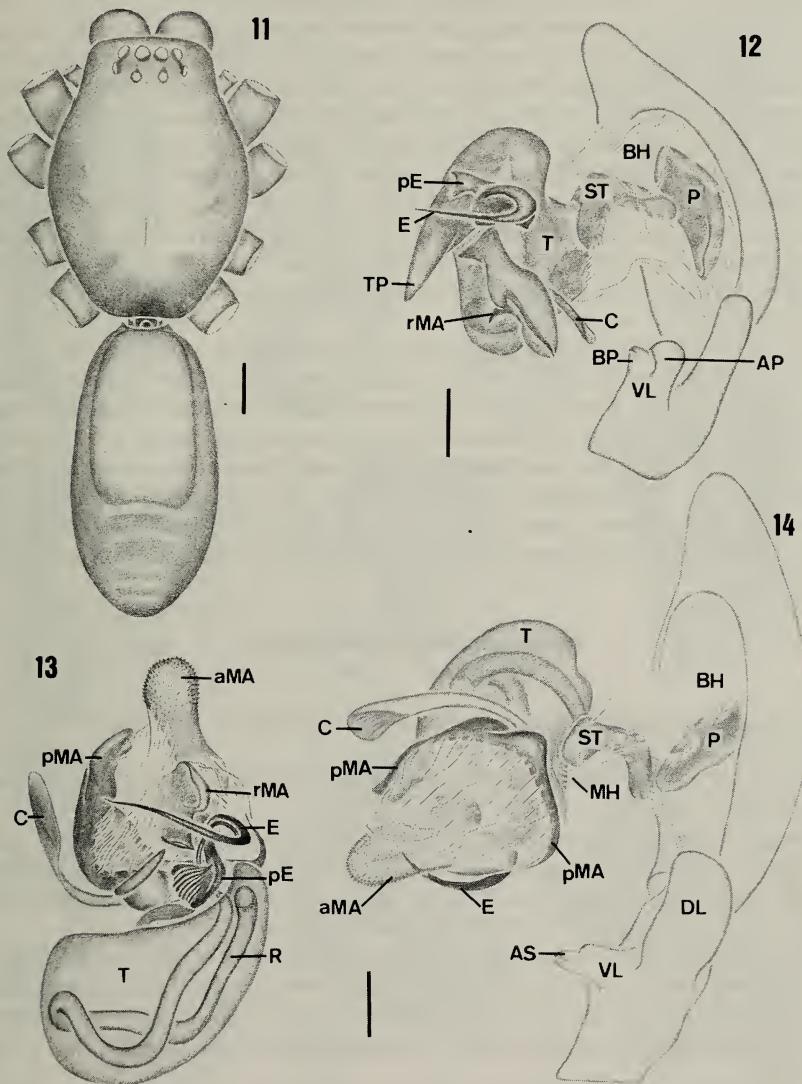
Diagnosis. *Ianduba* can be distinguished from other corinnids by the *Castianeira* like elongate body (fig. 11); male palpal retrolateral tibial apophysis bifurcated, with a prolaterally directed apical spur, surrounded by processes, on ventral lobe (AS, figs. 14, 15, 21, 25), uncoiled reservoir (R, fig. 13), large and complex median apophysis, and membranous conductor (C, figs. 7, 12, 14) arising beyond the median apophysis; epigynum with large median plate (fig. 17, 27, 31) and vulva with dorsal piece (DP, fig. 28).

Description. Total length (males and females) 5.25 - 8.80. Carapace oval in dorsal view, slightly granulated, widest at coxae II, cephalic area not delimited, gradually narrowed, anterior margin truncated; in lateral view, thoracic area with posteriorly abrupt declivity; thoracic groove longitudinal, long, shallow (fig. 11); clypeus well rebordered anteriorly, clypeal height two to three times AME diameter; anterior eye row procurved in frontal view; posterior eye row procurved in dorsal view; ocular quadrangle slightly longer than wide in dorsal view; median eyes circular, laterals oval; AME slightly larger than others. Interdistances: AME-AME separated by less than half their diameter; AME-ALE almost contiguous; PME-PME by more than their diameter; PME-PLE by approximately two diameters of PME; ALE-PLE almost contiguous. Chilum entire, not haired. Chelicerae slightly geniculate, with short basal condylus and proximal field of setae on ventral surface; promargin of fang furrow with three teeth, median larger; retromargin with two to four teeth of same length; in *I. patua*, teeth far from fang base (fig. 20); males of *I. vatapa* (fig. 19), *I. caxixe* and *I. patua* with short distal tooth-like apophysis on ventral, retrolateral surface; fang long, slender; cheliceral length approximately equal to one third of carapace length, less in females; endites slightly convergent, promargin slightly concave, retromargin with shallow longitudinal excavation, serrula in single row; labium as long as wide, with marginal, proximal constrictions; sternum slightly longer than wide, strongly rebordered, pre-coxal triangles present. Leg formula: 4123. Legs moderately long, covered by feathery and simple hairs; usually, three distal segments paler than proximal ones; tarsi and metatarsi with sparse scopula, metatarsi III and IV with ventral distal clusters of black setae; two pectinate claws, with 4-5 teeth; claw tufts dense, composed of short hairs; tarsal organ (fig. 1) capsulate, with circular aperture;



Figs. 7 - 10. *Ianduba varia* (Keyserling): 7, male palpal bulb, ventral; 8, apex of palpal bulb, ventral; 9, 10, apical sector of median apophysis, retrolateral (aMA, apical sector of median apophysis; C, conductor; T, tegulum).

tarsal trichobothria in two rows, trichobothrial base (fig. 2) with elongated ridge traversing lowered plate; female palpal tarsus clavate, with one pectinate claw; all trochanters notched; typical spination: I - femur d1-1, p0-0-1, r0, v0; tibia d0, p0, r0, v2-2-2; metatarsus d0, p0, r0, v2-2. II - femur d1-1, p0, r0, v0; tibia d0, p0, r0, v1r-2-2; metatarsus d0, p0, r0, v2-2. III - femur d1-1-1, p0, r0, v0; tibia d0, p1-1, r1-1, v2-2-2; metatarsus d0, p1-1-2, r1-1-2, v2-2-1. IV - femur d1-1-1, p0, r0, v0; tibia d0, p1-1, r1-1; v2-2-2; metatarsus d0, p1-1-2, r1-1-2, v2-2-1. Abdomen long, oval, densely covered by feathery hairs, with sparse long simple setae; male dorsal scutum large, quadrangular, covering anterior half of abdomen (fig. 11); female dorsal scutum a small circular anterior mark; ventral scutum absent in both sexes; margins of book lung spiracles wide, sclerotized; tracheal tubercle large, sclerotized; colulus a triangular haired plate; anterior lateral spinnerets convergent, conical, subcontiguous, two-segmented, distal segment short, truncate, with two major ampullate gland spigots on mesal margin, and many piriform gland spigots; posterior median spinnerets parallel, contiguous, one-segmented, with few aciniform gland spigots and at least two minor ampullate gland spigots; females with three large cylindrical gland spigots; posterior lateral spinnerets convergent, conical, separated by their diameter, two-segmented, distal segment short, truncate, with many small aciniform gland spigots; females with two large cylindrical gland spigots; males without cylindrical gland spigots on both posterior median and posterior lateral spinnerets; anal tubercle small, not modified. Male palp: femur with two dorsal and one prolateral apical spines. Patella unmodified. Tibia with bifurcated retrolateral apophysis; ventral lobe (VL, figs. 12, 14) with apical spur (AS, fig. 14) directed prolaterally, which is surrounded by basal and apical processes (BP, AP, fig. 12); dorsal lobe (DL, fig. 14) larger than ventral lobe, strong in *I. caxixe* and *I. varia*, less developed in *I. vatapa*, *I. patua* and *I. paubrasil*. Cymbium oval, with apical dorsal scopula, without retrolateral basal projections; basal haematodocha large (BH, figs. 12, 14); petiole (P, figs. 12, 14) large, quadrangular, visible retrolaterally in unexpanded bulb; subtegulum a semicircular, long T-shaped, sclerotized piece, without anelli (ST, figs. 12, 14); median haematodocha small, indistinct (MH, fig. 14); tegulum (T, figs. 7, 12 - 14) large, generally with tegular projection (TP, fig. 12), TP laminar in *I. vatapa*, concave in *I. patua* and conical in *I. caxixe* and *I. paubrasil*; in *I. varia*, TP absent; reservoir (R, fig. 13) simple, with few folds, not coiled; median apophysis large and complex, with three distinct sectors: prolateral sector (pMA, figs. 13, 14, 23) large, generally folded; retrolateral sector (rMA, figs. 12, 13, 23) generally with pointed, spine-shaped apices; apical sector (aMA, figs. 13, 14, 23) entire in *I. caxixe* and *I. varia*, bifid in *I. vatapa*, *I. patua* and *I. paubrasil*; in *I. varia*, median apophysis partially unsclerotized, with rMA cup-shaped and aMA clavate, covered by many small sharp points (figs. 7-10, 13, 14, 29, 30); conductor (C, figs. 7, 12 - 14) membranous, with lamellar apices, inserted apically in tegulum, arising behind median apophysis; in *I. varia*, conductor large, prolaterally turned around median apophysis, tip resting ventrally near apex of embolus; embolus (E, figs. 12 - 14) filiform, with proximal process (pE, figs. 12, 13), generally prolaterally inserted in tegulum; in *I. varia*, embolus inserted retrolaterally. Epigynum composed of large



Figs. 11 - 14. *Ianduba vatapa* sp. n.: 11, male body, dorsal. *I. caxixe* sp. n.: 12, left male palpus, expanded, retrolateral. *I. varia* (Keyserling): 13, left male bulb, dissected, ventral; 14, same, expanded, retrolateral (aMA, apical sector of median apophysis; AP, apical process of VL; AS, apical spur of VL; BH, basal haematochoda; BP, basal process of VL; C, conductor; DL, dorsal lobe of tibial retrolateral apophysis; E, embolus; MH, median haematochoda; P, petiole; pE, proximal process of embolus; pMa, prolateral sector of median apophysis; rMA, retrolateral sector of median apophysis; R, reservoir; ST, subtegulum; T, tegulum; TP, tegular projection; VL, ventral lobe of tibial retrolateral apophysis). Scale lines: 0.5 mm, fig. 11; 0.25 mm, figs. 12 - 14.

median plate; in *I. vatapa* and *I. paubrasil*, median plate convex, with well defined lateral borders; In *I. varia*, median plate concave, with lateral borders less defined; anterior borders of median plate directed laterally in *I. vatapa* and *I. paubrasil*, directed medially in *I. varia*; two posterior copulatory openings, conspicuous in *I. varia*, covered by lateral borders of median plate in *I. vatapa* and *I. paubrasil*; vulva with large, free dorsal piece (DP, fig. 28), entire in *I. vatapa*, bipartite in *I. paubrasil* and divided in two pieces in *I. varia*; copulatory ducts (CD, fig. 28) long and slender, straight in *I. varia*; folded in *I. vatapa* and *I. paubrasil*; in *I. varia*, bursae copulatrix arising from copulatory duct near the insertion in spermathecae; in *I. vatapa* and *I. paubrasil* bursae copulatrix apparently absent. Spermathecae (S, fig. 28) large and nearly spherical; fertilization ducts (FD, fig. 28) small.

Composition. Five species.

Distribution. From south Bahia, Brazil to northeastern Argentina.

Natural History. *Ianduba varia* is synanthropic in southern and southeastern Brazil. In the city of São Paulo it is common inside habitations, active mainly between six to nine PM (A. D. Brescovit, pers. commun.). FOWLER & VENTICINQUE (1995) reported *I. varia* as a component of the ground spider assemblage of Atlantic Forest at Ilha do Cardoso State Park, São Paulo. The egg-sac of *I. varia* is a flat disc composed by dense, plastic-like silk, with 23 to 27 large eggs ( $n = 2$ ). The representatives of all other species were collected in cocoa plantations in south Bahia.

### *Ianduba vatapa*, new species

(Figs. 11, 15 - 19)

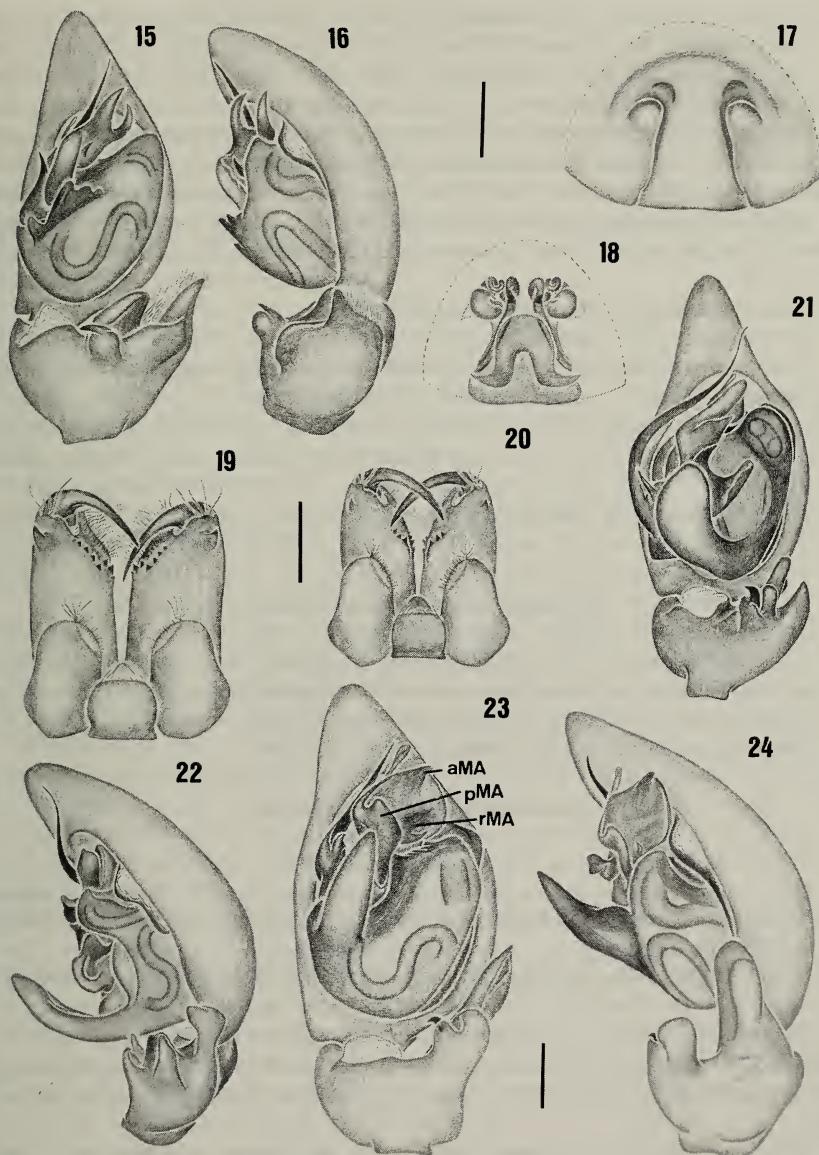
Types. Male holotype and female paratype from Santa Tereza Farm, Uruçuca, Bahia, Brazil (MNRJ 13509).

Etymology. The noun vatapá, from Brazilian Portuguese, refers a typical dish from Bahia cuisine.

Diagnosis. Males of *Ianduba vatapa* differ from those of *I. patua*, *I. caxixe* and *I. paubrasil* by dorsal lobe of retrolateral tibial apophysis with rounded basal extension and triangular apices and by the short, lobed, laminar tegular projection (figs. 15, 16); females differ by the wide median plate (fig. 17).

Description. Male (holotype). Carapace dark brown, chelicerae, endites and labium brown, sternum reddish brown, legs brown, gradually becoming yellow distally, abdomen dark violet, scutum reddish brown, dorsum with six posterior narrow transverse pale stripes (fig. 11), venter with four longitudinal narrow pale stripes.

Total length 5.45. Carapace 2.80 long, 2.00 wide, 1.12 high. Clypeus 0.27 high. Anterior eye row 0.70 long, posterior eye row 0.80 long. Eye diameters and interdistances: AME 0.17, ALE 0.13, PME 0.12, PLE 0.16; AME-AME 0.10, AME-ALE 0.07, PME-PME 0.12, PME-PLE 0.12, ALE-PLE 0.02. MOQ 0.35 length, anterior width 0.37, posterior width 0.37. Chelicerae 0.90 long, with three promarginal and four retromarginal teeth; venter-retrolateral surface with short distal tooth-like apophysis (fig. 19). Sternum 1.45 long, 1.25 wide. Abdo-



Figs. 15 - 24. *Landuba vatapa* sp. n.: 15, male palp, ventral; 16, same, retrolateral; 17, female epigynum, ventral; 18, female vulva, dorsal; 19, male, mouth parts, ventral. *I. patua* sp. n.: 20, male, mouth parts, ventral. 21, male palp, ventral; 22, same, retrolateral. *I. caxixe* sp. n.: 23, male palp, ventral; 24, same, retrolateral (aMA, apical sector of median apophysis; pMA, prolateral sector of median apophysis; rMA, retrolateral sector of median apophysis). Scale lines: 0,25 mm, figs. 15 - 18; 21-24; 0,5 mm, figs. 19, 20.

men 2.85 long, 1.40 wide. Leg measurements: I - femur 2.00 / patella 0.95 / tibia 1.75 / metatarsus 1.60 / tarsus 1.20 / total 7.50. II - 1.80 / 0.80 / 1.45 / 1.50 / 1.00 / 6.55. III - 1.55 / 0.75 / 1.20 / 1.50 / 0.85 / 5.85. IV - 2.20 / 0.90 / 2.00 / 2.45 / 1.15 / 8.70. Leg spination. III - femur d 1-0-0; tibia p0-1, r0-1 v 1p-2-2.

Palp: ventral lobe of tibial retrolateral apophysis with large, rounded apical process; dorsal lobe with rounded basal extension, apices with dense tuft of slender hairs; tegular projection an oblique lobed prolateral carina; pMA concave; rMA with pointed, spine-shaped apices; aMA bifid, with pointed apices; conductor small, near the median third of embolus; embolus straight, inserted prolaterally (figs. 15, 16).

Female (paratype). Coloration as in male.

Total length 5.65. Carapace 2.45 long, 1.85 wide, 0.75 high. Clypeus 0.20 high. Anterior eye row 0.67 long, posterior eye row 0.75 long. Eye diameters and interdistances: AME 0.15, ALE 0.12, PME 0.10, PLE 0.15; AME-AME 0.07, AME-ALE 0.05, PME-PME 0.15, PME-PLE 0.15, ALE-PLE 0.02. MOQ 0.32 length, anterior width 0.32, posterior width 0.35. Chelicerae 0.97 long, teeth as in male; without venter-retrolateral apophysis. Sternum 1.35 long, 1.25 wide. Abdomen 2.90 long, 1.75 wide. Leg measurements: I - femur 1.75 / patella 0.85 / tibia 1.45 / metatarsus 1.35 / tarsus 0.90 / total 6.30. II - 1.60 / 0.80 / 1.30 / 1.25 / 0.80 / 5.80. III - 1.40 / 0.75 / 1.05 / 1.25 / 0.75 / 5.20. IV - 1.95 / 0.85 / 1.75 / 2.05 / 0.95 / 7.55. Leg spination. III - femur d1-0-1; tibia v1p-2-2; IV - tibia v1p-2-2.

Epigynum: median plate convex, large, wide, with well defined lateral borders and anterior borders directed laterally; copulatory openings not visible ventrally; vulva with entire, horseshoe-shaped dorsal piece, copulatory ducts strongly folded anteriorly; spermathecae spherical (figs. 17, 18).

Distribution. Known only from the type locality.

### *Ianduba patua*, new species

(Figs. 20 - 22)

Types. Male holotype from Matiapá Farm, Camacan, Bahia, Brazil, 14.X.1978, J. S. Santos col. (MCN 27665). Male paratype from Mineiro Farm, Gandu, Bahia, Brazil, 20.XI.1970, J. S. Santos col. (MNRJ 13507).

Etymology. From Brazilian Portuguese, Patuá is the name of a kind of basket, referring to the shape of the large tegular apophysis.

Diagnosis. Males of *Ianduba patua* differ from all other *Ianduba* by the divided dorsal lobe of retrolateral tibial apophysis with the basal extension far apart from apices and by the large, concave, spoon shaped tegular apophysis (figs. 21, 22).

Male (holotype). Carapace dark brown, chelicerae, endites and labium brown, sternum reddish brown, legs brown, gradually becoming yellow distally, abdomen dark violet, scutum reddish brown, dorsum with five posterior narrow pale stripes, venter with four longitudinal narrow pale stripes.

Total length 5.25. Carapace 2.60 long, 1.75 wide, 0.95 high. Clypeus 0.25 high. Anterior eye row 0.58 long, posterior eye row 0.69 long. Eye diameters

and interdistances: AME 0.15, ALE 0.13, PME 0.10, PLE 0.11; AME-AME 0.06, AME-ALE 0.05, PME-PME 0.13, PME-PLE 0.13, ALE-PLE 0.03. MOQ length 0.30, anterior width 0.33, posterior width 0.35. Chelicerae 0.95 long, with three promarginal and three retromarginal teeth; venter-retrolateral surface with short distal tooth-like apophysis (fig. 20). Sternum 1.37 long, 1.22 wide. Abdomen 2.40 long, 1.25 wide. Leg measurements: I - femur 1.90 / patella 0.85 / tibia 1.70 / metatarsus 1.55 / tarsus 1.05 / total 7.05. II - 1.70 / 0.80 / 1.40 / 1.40 / 0.95 / 6.25. III - 1.45 / 0.70 / tibia, metatarsus and tarsus missing. IV - 2.10 / 0.85 / 1.95 / 2.30 / 1.10 / 8.30. Leg spination. I- femur d1-0, p0. II - femur d1-0. III - femur d1-0-1; tibia and metatarsus missing.

Palp: ventral lobe of retrolateral tibial apophysis with truncated apical process; dorsal lobe with isolated, pointed basal extension, apices constricted medially; tegular projection very large, concave, inserted medially on tegulum; pMA with concave base; rMA with pointed, spine-shaped apices; aMA bifid, with rounded apices; conductor small, near the apical third of embolus; embolus gently curved, inserted prolaterally (figs. 21, 22).

Female. Unknown.

Variation. Paratype: total length 4.80; carapace 2.40; femur I 1.75.

Distribution. South Bahia, Brazil.

### *Ianduba caxixe*, new species

(Figs. 12, 23, 24)

Types. Male holotype from Matiapá Farm, Camacan, Bahia, Brazil, 14.X.1978, J. S. Santos col. (MCN 27666). Male paratype from Camacan, Bahia, Brazil, CEPLAC col. (MNRJ 13506).

Etymology. The noun *caxixe*, from Brazilian Portuguese, is a regional word meaning a suspicious business involving cocoa producing lands in south Bahia.

Diagnosis. Males of *Ianduba caxixe* differ from those of *I. vatapa*, *I. patua* and *I. paubrasil* by the long dorsal lobe of the retrolateral tibial apophysis, without ventral extension and by the conical, prolaterally inserted, not excavated tegular apophysis (figs. 23, 24).

Male (holotype). Carapace dark brown, chelicerae, endites and labium brown, sternum reddish brown, legs brown, gradually becoming yellow distally, abdomen dark violet, scutum reddish brown, dorsum with six posterior narrow pale stripes, venter pale, without stripes.

Total length 6.60. Carapace 3.10 long, 2.10 wide, 1.30 high. Clypeus 0.30 high. Anterior eye row 0.75 long, posterior eye row 0.87 long. Eye diameters and interdistances: AME 0.17, ALE 0.15, PME 0.12, PLE 0.15; AME-AME 0.10, AME-ALE 0.02, PME-PME 0.15, PME-PLE 0.17, ALE-PLE 0.05. MOQ length 0.37, anterior width 0.40, posterior width 0.42. Chelicerae 1.02 long, with three promarginal and four retromarginal teeth; venter-retrolateral surface with short distal tooth-like apophysis. Sternum 1.62 long, 1.30 wide. Abdomen 3.30 long, 1.60 wide. Leg measurements: I - femur 2.15 / patella 1.05 / tibia 1.95 / metatarsus 1.80 / tarsus 1.25 / total 8.20. II - 1.90 / 0.95 / 1.55 / 1.60 / 1.15 / 7.15. III - 1.70 / 0.85 / 1.75 / 1.70 / 0.95 / 6.95. IV - 2.40 / 1.00 / 2.10 / 2.80 / 1.30 /

9.60. Leg spination. I- femur d1-0. III - femur d1-0-1, p0-0-1; tibia v1p-2-2. IV - tibia v1r-2-2.

Palp: ventral lobe of tibial retrolateral apophysis with rounded apical process (AP, fig. 12); dorsal lobe long, ventral surface lamellar, tegular projection large, not prolaterally excavated; pMA folded; rMA with pointed, spine-shaped apices; aMA entire, with pointed apices; conductor small, near apices of embolus; embolus straight, inserted prolaterally (figs. 12, 23, 24).

Female. Unknown.

Variation. Male paratype: total length 5.90; carapace 3.20; femur I 2.10.

Distribution. South Bahia, Brazil.

### *Ianduba paubrasil*, new species (Figs. 25 - 28)

Type. Male holotype from Pau-Brasil Farm, Itamaraju, Bahia, Brazil, 27.II.1969, J. S. Santos col. (MNRJ 13508); two female paratypes from same locality and collector, 13.III.1969 (MCN 27689); 16.XI.1969 (MNRJ 13229); male paratype from same locality, CEPLAC col., X-XII.1969 (MNRJ 13510).

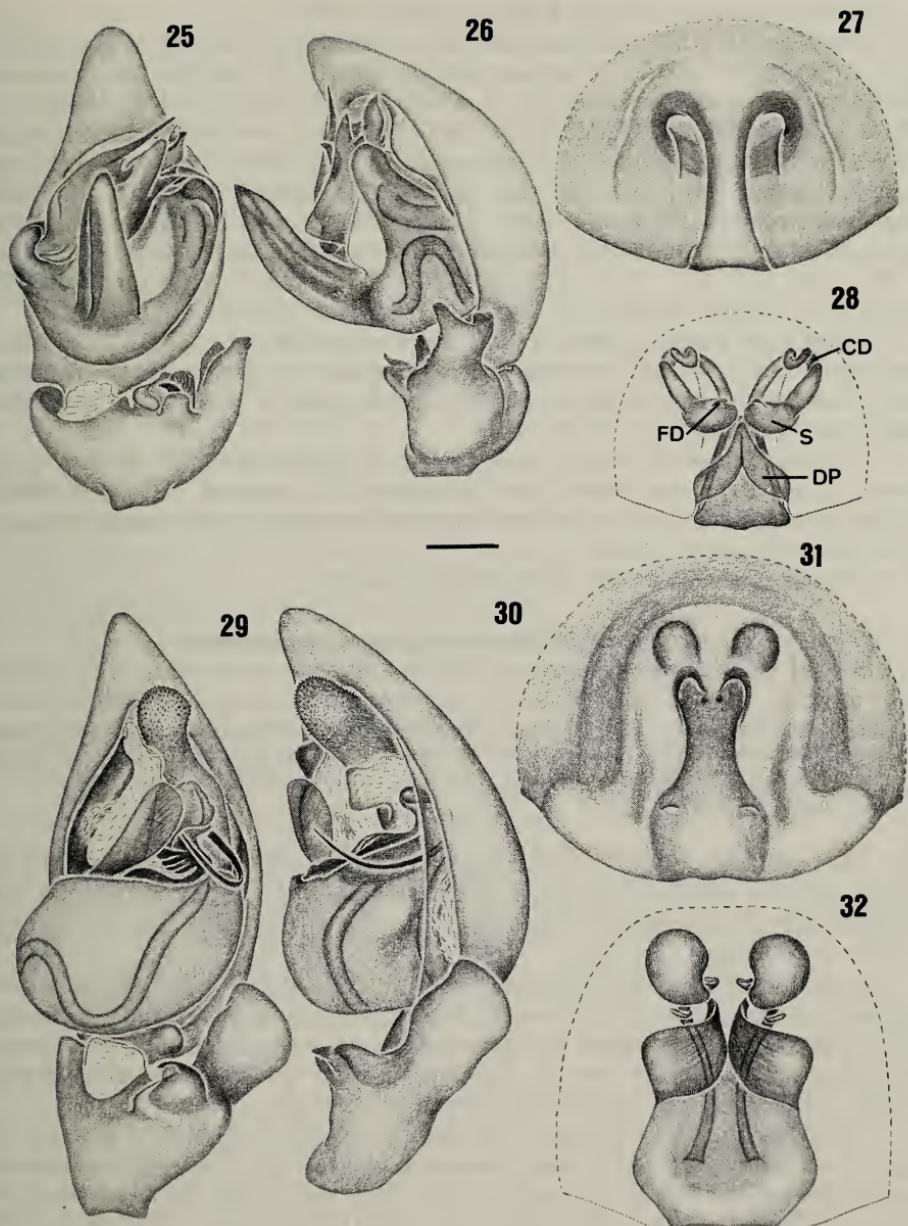
Etymology. The specific name is a noun in apposition taken from the type locality.

Diagnosis. Males of *Ianduba paubrasil* differ from that of *I. vatapa*, *I. patua* and *I. caxixe* by the ventral lobe of retrolateral tibial apophysis with laminar apical process and by the conic, medially inserted, prolaterally excavated tegular apophysis (figs. 25, 26); females differ from those *I. vatapa* by the narrow median plate (fig. 27).

Male (holotype). Carapace dark brown, chelicerae, endites and labium brown, sternum reddish brown, legs brown, gradually becoming yellow distally, abdomen dark violet, scutum reddish brown, dorsum with four posterior pale stripes, venter with four longitudinal narrow pale stripes.

Total length 5.30. Carapace 2.70 long, 1.85 wide, 0.90 high. Clypeus 0.25 high. Anterior eye row 0.70 long, posterior eye row 0.77 long. Eye diameters and interdistances: AME 0.17, ALE 0.12, PME 0.12, PLE 0.15; AME-AME 0.07, AME-ALE 0.05, PME-PME 0.12, PME-PLE 0.12, ALE-PLE 0.05. MOQ length 0.35, anterior width 0.40, posterior width 0.37. Chelicerae 0.95 long, with three promarginal and three retromarginal teeth; without venter-retrolateral apophysis. Sternum 1.35 long, 1.15 wide. Abdomen 2.65 long, 1.45 wide. Leg measurements: I - femur 2.00 / patella 0.85 / tibia 1.75 / metatarsus 1.65 / tarsus 1.20 / total 7.45. II - 1.70 / 0.80 / 1.40 / 1.40 / 1.00 / 6.30. III - 1.50 / 0.70 / 1.15 / 1.40 / 0.85 / 5.60. IV- missing. Leg spination. II - tibia v1p-2-2. III - femur d1-0-1, p0-0-1; tibia v1r-2-2.

Palp: ventral lobe of tibial retrolateral apophysis with developed basal process; dorsal lobe bifid at apices, with small basal extension; tegular projection large, inserted medially on tegulum, prolaterally excavated; pMA large, with pointed projection; rMA with pointed, spine-shaped apices; aMA entire, with flattened apices; conductor small, near the apices of aMA; embolus arising from a prolateral tegular projection, base large, pE median, inserted ventrally. (figs. 25, 26).



Figs. 25 - 32. *Ianduba paubrasil* sp. n.: 25, male palp, ventral; 26, same, retrolateral; 27, female epigynum, ventral; 28, female vulva, dorsal. *I. varia* (Keyserling): 29, male palp, ventral; 30, same, retrolateral; 31, female epigynum, ventral; 32, female vulva, dorsal (CD, copulatory duct; DP, dorsal piece; FD, fertilization duct; S, spermathecae). Scale line: 0.25 mm.

Female (MCN paratype). Coloration as in male.

Total length 6.50. Carapace 2.80 long, 2.00 wide, 0.55 high. Clypeus 0.25 high. Anterior eye row 0.70 long, posterior eye row 0.77 long. Eye diameters and interdistances: AME 0.15, ALE 0.15, PME 0.12, PLE 0.12; AME-AME 0.07, AME-ALE 0.02, PME-PME 0.12, PME-PLE 0.15, ALE-PLE 0.02. MOQ length 0.40, anterior width 0.37, posterior width 0.37. Chelicerae 0.97 long, teeth as in male. Sternum 1.55 long, 1.27 wide. Abdomen 3.50 long, 1.90 wide. Leg measurements: I - femur 2.05 / patella 1.05 / tibia 1.80 / metatarsus 1.60 / tarsus 1.15 / total 7.65. II - 1.85 / 0.95 / 1.55 / 1.50 / 1.00 / 6.85. III - 1.65 / 0.85 / 1.30 / 1.65 / 0.90 / 6.35. IV - 2.20 / 0.95 / 2.05 / 2.45 / 1.15 / 8.80. Leg spination. III - femur d1-0-1; tibia v1p-2-2. IV - femur d1-0-1; tibia v1p-2-2.

Epigynum: median plate convex, long, narrow, with well defined lateral borders and anterior borders directed laterally; copulatory openings not visible ventrally; vulva with bipartite dorsal piece; copulatory ducts folded anteriorly; spermathecae spherical (figs. 27, 28).

Variation. Male paratype: total length 5.70; carapace 2.70; femur I 2.05. Female paratype: total length 6.40; carapace 2.75; femur I 2.00. The MNRJ female paratype has six dorsal posterior pale stripes and only two ventral longitudinal stripes on the abdomen.

Distribution. Know only from the type locality.

### *Ianduba varia* (Keyserling), new combination

(Figs. 1, 2, 7 - 10, 13, 14, 29 - 32)

*Castianeira varia* KEYSERLING, 1891: 69, figs. 38, 38a, female holotype from Blumenau, Santa Catarina State, Brazil, Hetschko col. (The Natural History Museum, London, not examined); MELLO-LEITÃO, 1923: 38; CAMARGO, 1950: 462, figs. 5a-g; ROEWER, 1954: 615; BONNET, 1956: 971; FOWLER & VENTICINQUE, 1995: 81.

Diagnosis. Males of *I. varia* are easily recognized by the retrolaterally inserted embolus and the partially unsclerotized median apophysis (figs. 29, 30); females differ by the concave, constricted medially median plate and conspicuous copulatory openings (fig. 31).

Male (São Paulo, São Paulo, Brazil). Carapace and chelicerae reddish brown, endites, labium and sternum brownish, legs brown, abruptly becoming yellow in distal half of tibiae; metatarsi and tarsi yellow; abdomen violet brown, dorsum with large anterior white spot on scutum and four posterior transversal pale stripes, venter with two longitudinal narrow pale stripes.

Total length 7.40. Carapace 3.50 long, 2.70 wide, 1.20 high. Clypeus 0.37 high. Anterior eye row 0.92 long, posterior eye row 1.10 long. Eye diameters and interdistances: AME 0.20, ALE 0.20, PME 0.17, PLE 0.17; AME-AME 0.10, AME-ALE 0.05, PME-PME 0.17, PME-PLE 0.25, ALE-PLE 0.07. MOQ length 0.47, anterior width 0.50, posterior width 0.50. Chelicerae 1.45 long, with three promarginal and two retromarginal teeth; without venter-retrolateral apophysis. Sternum 1.85 long, 1.55 wide. Abdomen 3.80 long, 2.05 wide. Leg measurements: I - femur 2.95 / patella 1.30 / tibia 2.65 / metatarsus

2.45 / tarsus 1.60 / total 10.95. II - 2.55 / 1.25 / 2.15 / 2.15 / 1.45 / 9.55. III - 2.30 / 1.10 / 1.75 / 2.25 / 1.15 / 8.55. IV - 3.30 / 1.30 / 2.90 / 3.75 / 1.50 / 12.75. Leg spination. III-femur p0-0-1, r0-0-1. IV - femur p0-0-1, r0-0-1.

Palp: ventral lobe of tibial retrolateral apophysis with flattened, weakly differentiate apical process; dorsal lobe large, strong, without basal extension; tegular projection absent; median apophysis partially unsclerotized, pMA semicircular, rMA cup-shaped, aMA entire, clavate, covered by many small sharp points; conductor large, prolaterally turned around median apophysis, tip located ventrally, near apex of embolus; embolus curved, inserted retrolaterally (figs. 7 - 10, 13, 14, 29, 30).

Female (São Paulo, São Paulo, Brazil). Coloration as in male.

Total length 8.50. Carapace 3.80 long, 2.70 wide, 1.55 high. Clypeus 0.32 high. Anterior eye row 0.95 long, posterior eye row 1.10 long. Eye diameters and interdistances: AME 0.25, ALE 0.22, PME 0.20, PLE 0.20; AME-AME 0.10, AME-ALE 0.03, PME-PME 0.15, PME-PLE 0.23, ALE-PLE 0.08. MOQ length 0.50, anterior width 0.53, posterior width 0.53. Chelicerae 1.35 long, teeth as in male. Sternum 1.95 long, 1.65 wide. Abdomen 4.50 long, 2.50 wide. Leg measurements: I - femur 2.85 / patella 1.45 / tibia 2.45 / metatarsus 2.25 / tarsus 1.50 / total 10.50. II - 2.55 / 1.35 / 2.15 / 2.05 / 1.45 / 9.55. III - 2.35 / 1.20 / 1.80 / 2.20 / 1.20 / 8.75. IV - 3.25 / 1.45 / 2.85 / 3.55 / 1.50 / 12.60. Leg spination. III-femur p0-0-1, r0-0-1. IV - femur p0-0-1, r0-0-1.

Epigynum: median plate constricted medially; lateral borders not well defined; anterior borders directed medially; copulatory openings visible ventrally; vulva with divided, quadrangular dorsal piece, copulatory ducts straight; spermathecae large, kidney-shaped; bursae copulatrix arising from copulatory duct near insertion in spermathecae (figs. 31, 32).

Variation. Males (n = 10): total length 6.00 - 8.60; carapace 3.00 - 4.40; femur I 2.50 - 3.35; females (n = 10): total length 6.50 - 9.00; carapace 3.00 - 4.10; femur I 2.35 - 3.30. The number of dorsal posterior transversal stripes in both sexes varies from four to six. The length of the clavate apical sector of median apophysis of the male palp varies in the specimens examined. In the epigynum, the copulatory openings vary from transversal to almost longitudinal.

Distribution. Southeastern Brazil to northeastern Argentina.

Material examined. BRAZIL Minas Gerais: Barbacena (20 km SW from Town), 1♂, 25.II.1990, S. A. Marshall col. (AMNH); Rio de Janeiro: 1♂ (MNRJ 759); Nova Friburgo (Fazenda São João), 1♂, 1♀, 10.X.1988, R. Pinto-da-Rocha col. (MHCI); Rio de Janeiro, 1♂, Aplé col. (MNRJ 41869); (Serra dos Órgãos), 1♀, 20.IV.1965, H. Levi col. (MCZ); (Floresta da Tijuca), 1♂ (MNRJ 42077); 1♂, Moraes col. (MNRJ 42130); 1♂, J. Eugenio col. (MNRJ 58151); 1♂, 1-28.II.1990, S. A. Marshall col. (AMNH); 1♂, 1♀, 17.IV.1965, H. Levi col. (MCZ); (Leblon), 1♂, III.1946, H. Sick col. (AMNH); São Paulo: Ubatuba (Instituto Oceanográfico), 1♂, V.1967, P. Moutouchet col. (MZSP 12542); Ilhabela (Ilha de São Sebastião), 1♀, 20.III.1948, H. Urban col. (MZSP 12541); Mogi das Cruzes, 1♂, 03.V.1942, T. Meisner col. (MZSP 10386); Osasco, 1♂, III.1991, J. Bedana col. (IBSP 4386); 1♀, IX.1993, M. A. de Castro col. (IBSP 5843); São Paulo, 1♂, 1941, J. Damico col. (MZSP 1416); 1♂, XI.1979, A. Blikstad col. (IBSP 4722); 1♂, X.1982, N. Lizaso col. (IBSP 3533); 1♂, 1♀, VII.1991, S. Pires col. (IBSP 5063); 1♀, XI.1991, C. M. da Silva col. (IBSP 5128, with egg-sac); 1♀, XI.1992, M. S. Neves col. (IBSP 6051, with egg-sac); 1♂, 22.II.1995, C. Bertin col. (IBSP 5981); 1♂, 09.VI.1995, M. C. Gerald col. (IBSP 1799); 1♂, 04.VII.1995, A. D. Brescovit col. (IBSP 175); (Instituto Butantan), 1♂, 1♀, XII.1994, A. D. Brescovit col. (IBSP 6116); 1♀, X.1989 (IBSP 4933); (Ipiranga), 2♀, II.1943 (MZSP 5196); 3♂, 1♀,

17.IV.1943, Barroso col. (MZSP 12543); 1 ♂, 1 ♀, 02.III.1962, Medinos col. (MZSP 7934); 2 ♂, 1 ♀, 02.II.1967, P. de Biasi col. (MZSP 5610); (Alto da Serra), 1 ♀, 18.III.1983, F. Lane & B. Soares col. (MZSP 12544); São Miguel Arcanjo (Parque Estadual Carlos Botelho), 2 ♂, 14.X.1990, A. B. Bonaldo col. (MCN 20482); Boracéia, 1 ♀, 06.XI.1968, Rabello col. (MZSP 12540); 2 ♀, 24.XI.1960, Rabello col. (MZSP 7383); Cananéia (Parque Estadual da Ilha do Cardoso), 1 ♀, 12-16.IX.1988, J. Bernardo & L. Romagnano col. (MCN 22820); Parelheiros, 1 ♀, I.1995, R. Schwark col. (IBSP 5875); Juquitibá, 1 ♂, XII.1983, E. Mattos col. (IBSP 4710); **Paraná:** Paranaguá (Ilha do Mel, Praia Grande), 1 ♀, 25.VI.1989, R. Dutra col. (MCN 20548); **Santa Catarina:** Governador Celso Ramos (Palmas das Gaivotas), 3 ♂, 1 ♀, 1-24.II.1994, L. Moura col. (MCN 25183); **Rio Grande do Sul:** 1 ♂ (MCN 18367); São Leopoldo, 2 ♂, 1 ♀, 15.III.1973, A. A. Lise col. (MCN 808); **ARGENTINA.** **Misiones:** Iguazú, 1 ♂, XI.1948, M. Birabén col. (MLP); **Corrientes:** 1 ♀, 11-21.IV.1987, Garabí Project col. (MCP).

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